

Sustainable Estuary Management: Reconciling development and conservation pressures in European port-estuary spaces

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The Port of Rotterdam and Maasvlakte II

Rotterdam is the largest port in Northern Europe, handling 378 million tonnes of cargo in 2006. Over 70,000 people were employed in port-related activity in the Rotterdam-Rijnmond region in 2005 (Port of Rotterdam, 2007a). Rotterdam had a population of approximately 596,000 in 2005¹. The Port Authority acts as an independent (public) organisation; its major shareholders are the municipality of Rotterdam and the Dutch government (Port of Rotterdam, 2007b). It is responsible for the management of the port, transport infrastructure and dredging. Plans by the Port Authority to extend the existing port area via Maasvlakte II have been in discussion for well over a decade. Maasvlakte II is proposed as an economic activity area that will extend the existing port by approximately 1000 hectares². This will form an extension to the existing Maasvlakte I site and will be created by means of land reclamation from the North Sea. The project is planned in a Natura 2000 designated area and has implications for three sites designated as Special Areas of Conservations (SACs) and Special Protected Areas (SPAs) (Voordelta, Voorne's Duin and Duinen van Goeree).

The need for Maasvlakte II was based principally on economic grounds, to support the future growth and competitiveness of the port itself and the wider Dutch economy³. It is argued that the port will reach maximum capacity in terms of container transfer facilities over the next five years and that Maasvlakte II will provide space for further industrial activity and a new harbour for deep-sea container vessels. The Port Authority estimates it will create an additional 6,200 jobs (FTE) (Port of Rotterdam and Maasvlakte 2 Project Organization, 2007). It is estimated that the development will cost more than €3bn, with the costs of the compensation measures estimated at €44.9m and the costs of land reclamation estimated at €2.5m⁴. This will be mainly financed by the Port Authority, with the Dutch State contributing €571m for infrastructure costs⁵ and investing a further €500m in shares in the Port Authority. In addition, regional partners will finance some of the subprojects of the scheme⁶.

A key stipulation of the Maasvlakte II development is that it is designed and managed according to the principles of sustainable development. This includes plans for business clustering to encourage industrial symbiosis, utilising land efficiently and promoting sustainable transport infrastructure and business operations (DCMR and Port of Rotterdam, 2007). Air emission targets and reducing CO₂ are also key priorities. Maasvlakte II is part of a larger proposal for the development of the wider Rotterdam port area known as the Rotterdam Mainport Development Project (PMR). The PMR project is a joint venture between various ministries of the Dutch

¹ <http://www.rotterdam.nl/Rotterdam/Openbaar/Diensten/COS/Publicaties/PDF/KC2006UK.pdf>

² The total surface area of land reclaimed will actually be 2,000 hectares. The 1,000 hectares of non-industrial land will include sea defences and space for transport infrastructure, <http://maasvlakte2.com/en/home>.

³ <http://maasvlakte2.com/en/home>

⁴ The €2bn required for financing the first stage of the Maasvlakte II build is being supported through a series of loan agreements secured by the Port Authority (http://www.newdelta.org/navigatie/frameset.asp?knop_id=20000601&mnu=1)

⁵ This includes the construction of a sea wall, the widening of the existing maritime access route as well as rail tracks and roads

⁶ <http://www.maasvlakte2.com/en/home>

Government⁷, Rotterdam Metropolitan Region, the Municipality of Rotterdam and the Province of South Holland. PMR consists of three elements:

- 1) The construction of Maasvlakte 2 (the Port of Rotterdam will bear a significant proportion of the costs and risks of constructing this)
- 2) The development of the existing Rotterdam area, to make the port and industrial area more efficient. This includes making more effective use of the existing port area through intensification projects, namely, to gain 200ha of space by 2021 through redevelopment, land reclamation and intensified use of port-related functions, and also through quality of life projects, which seek to enhance living quality in the Rijnmond region e.g. reducing noise, creating small recreational areas etc⁸ (the municipality of Rotterdam will be supporting this project)
- 3) The development of 750-hectares of wildlife and recreational area consisting of three sites located to the north and south of Rotterdam (the province of South Holland will take the lead on this project)

These three aspects of the PMR are being developed in conjunction with one another.

Planning procedures and the decision-making process

“The Maasvlakte expansion project in Rotterdam is the ideal example of what should not happen. They started planning in the early 1990s and they still do not know when it will be operational. Rotterdam port has taken all the necessary environmental measures, every one you could think of. They were even considered an example of ‘best practice’ for the commission. But the main result so far has been huge amounts of money paid to lawyers.”

(Patrick Verhoeven, Secretary-General, European Sea Ports Organisation)⁹

As the quote above suggests, the story of Maasvlakte II is a long and complicated one. The original plan for Maasvlakte II was conceived in the early 1990s by the port authority, with a planning application and environmental impact statement submitted in 1998. These draft plans and documents (which included the plans for the wider Rotterdam Mainport Project) were consulted on extensively and were open to public participation and appeal. In 2003, following the release of the final draft of the planning application, eighteen appeals were logged with the Council of State from a range of stakeholders, objecting to various elements of the application. This included NGOs, companies and people living in the areas near to the proposed site. The appeals principally related to the effects of the land reclamation on the designated sea reserve and the legal basis of the proposed compensation areas¹⁰. Heralded as a significant move forwards in the planning process, also in 2003, the European Commission approved plans for Maasvlakte II on the basis of overriding public interest, stating that no viable alternatives to the expansion existed¹¹. Positive advice was received regarding the provisions made in the proposals for the European

⁷ Including the Ministry of Transport and Public Works; Ministry of Housing, Spatial Planning & the Environment; Ministry of Economic Affairs; Ministry of Agriculture, Nature & Food Quality and the Ministry of Finance.

⁸ <http://maasvlakte2.com/en/home>

⁹ http://www.portofrotterdam.com/en/news/newsservice/31052007_31.jsp, press release from Port of Rotterdam, 31/05/2007

¹⁰ <http://maasvlakte2.com/en/home>

¹¹ <http://www.ens-newswire.com/ens/apr2003/2003-04-28-02.asp>, ‘EU Allows Developments that Impact Natura 2000 Sites’, Environment News Service.

designated areas (including measures to ensure that compensation should be developed at specific times in the development process). Despite this, in 2005, the Council of State (Dutch High Court) upheld a number of the objections it had received to specific parts of the application. This ruling was viewed by some as evidence of the more stringent planning process in operation at a national level in the Netherlands. One particular appeal which was upheld was that of the National Fishers Product Organisation (Produktschap Vis) who argued that the impact of Maasvlakte II on fish larvae transport to the Wadden Sea (Waddenzee) had not been sufficiently investigated (Paralia Nature, 2005).

In order to resolve the objections upheld by the Council of State, the planning application was amended by the authorities during 2006 and a Strategic Environmental Assessment and Appropriate Assessment (evaluating the impacts of the land reclamation on the European designated sites) was also carried out. Additional habitat baseline studies were also commissioned to assist in monitoring future impacts on protected species within the specific designated ecosystems. In late 2006, the planning application and Strategic Environmental Assessment were approved by the Lower and Upper House. After securing this approval, the competent authorities (Rotterdam Municipal Council and the Dutch Minister of Transport, Public Works and Water Management) were able to apply for construction permits for Maasvlakte II in 2007. These were conditional upon the approval of two Environmental Impact Assessment reports (which were also completed in 2007) for two major elements of the Maasvlakte II project; construction and zoning & land-use elements (including a proposed new zoning plan)¹². These documents were consulted on via a public enquiry and were re-drafted to incorporate some of the comments submitted. Towards the end of 2007, the independent committee assessing the EIA reports for construction and zoning concluded that they dealt sufficiently with evaluating the impacts of the port expansion¹³. The final drafts of the reports were made available to the public for consultation and comment in January 2008, with a series of public meetings organised with professionals from the authorities to answer questions. Following this latest round of consultation, the Authorities received a number of responses questioning some of the possible side effects of Maasvlakte II as opposed to its actual construction, which is now generally accepted (59 comments were submitted in this latest consultation exercise). Final drafts of the zoning plans and permits are to be submitted for inspection in early summer 2008, with the public able to submit final objections or lodge an appeal against these¹⁴.

Stakeholder engagement

Stakeholder engagement for the Maasvlakte II development is reported to have been considered “exemplary” by the European Commission¹⁵. Early public involvement and engagement in the planning process of Maasvlakte II are cited as critical factors in helping to reduce (the already) lengthy and costly delays (Paralia Nature, 2005).

¹² The EIA for construction included assessments of the effects of sand extraction and the possible impacts of the development on North Sea currents. The EIA for zoning looked into the possible effects of the development on the surrounding area e.g. traffic volumes (Port of Rotterdam and Maasvlakte 2 Organization, 2008)

¹³ http://www.maasvlakte2.com/en/news/news_items/news_2008/Contract_construction_signed.jsp

¹⁴ http://www.maasvlakte2.com/en/news/news_items/news_2008/Contract_construction_signed.jsp

¹⁵ http://www.newdelta.org/navigatie/frameset.asp?knop_id=20000601&mnu=1

The support and commitment of a broad range of stakeholders was said to have been secured early on in the development of the plans for Maasvlakte II via a series of signed agreements overseen by the organisation, ROM-Rijnmond. ROM-Rijnmond is a partnership organisation, established in 1993, to bring stakeholders in the Rijnmond region together with the objective of achieving a balance between the economic development of the Port of Rotterdam and the maintenance of a high quality living environment¹⁶. Although not specifically established for the purpose of bringing stakeholders together for the Maasvlakte II development, it now partly functions to oversee this process. Its focus is on the compensation areas planned, as well as the broader package of agreements being developed as part of the wider PMR project. The partnership is intended as a platform for consultation, co-ordination and conflict resolution and serves as a facilitator to speed up projects and keep them on track. It is not an executive body but decisions made by its Executive Council (a group of political representatives from all the public stakeholders involved) have the power of binding agreements. Partners include the national government, the provincial authority, the Rotterdam Metropolitan Region, City of Rotterdam, seventeen municipal authorities, the Port of Rotterdam, Rotterdam Chamber of Commerce and Deltalinqs, an organisation representing 600 logistical and industrial companies in the Rotterdam area (ROM-Rijnmond, 2005). Covenants signed for this partnership expire in 2010¹⁷. It is uncertain whether this partnership will continue beyond then if Maasvlakte II goes ahead as planned, without further complications.

As the planning process has evolved, formal consultation with interested stakeholder groups has occurred in the follow-up to the submission of the EIA via the 'Social Parties Council' (OMP). This includes representatives of environmental, fisheries, agricultural and recreational organisations, VNO-NCW (Confederation of Netherlands Industry and Employers), Deltalinqs, Rotterdam Chamber of Commerce and Local Authorities in the surrounding area¹⁸. As was the case in Antwerp, this engagement with stakeholders means enables these groups to influence the compensation packages which are developed (Paralia Nature, 2005). In terms of formal consultation with the general public, the Ministry of Transport, Public Works and Water Management has been responsible for dealing with public inquiry issues. Drop-in evenings were organised to inform local residents in the Rijnmond area about the plans and projects associated with Maasvlakte II, with professionals representing the Port Authority and the Ministry for Public Works also present to answer questions¹⁹.

Although agreement on the compensation and mitigation measures for Maasvlakte II is said to have been reached by all 'involved parties'²⁰, some groups chose not to participate in the stakeholder engagement process. The authorities acknowledge that they have not been able to bring everyone on-board in the stakeholder management process and accept that some groups will continue to legally challenge the decisions that are made. Milieu Defense is an environmental NGO which has refused to

¹⁶ The Ministry of Housing, Spatial Planning and the Environment designated ten 'ROM' or Spatial Planning and the Environment areas in the Netherlands in 1993, with Rijnmond being one of them (ROM-Rijnmond, 2005)

¹⁷ <http://www.rom-rijmond.nl/english/index.shtml>

¹⁸ www.maasvlakte2.com/en/project/mainportontwikkeling/parties_involved/index.jsp

¹⁹ <http://www.maasvlakte2.com/en/home>

²⁰ http://www.newdelta.org/navigatie/frameset.asp?knop_id=20000601&mnu=1

participate in stakeholder consultation on the grounds that they are fundamentally opposed to the Maasvlakte II development going ahead regardless of the proposed compensation package. It is likely that this group will submit an objection in the final stages of the planning process. The National Fishers Product Organisation (Produktschap Vis) is another prominent stakeholder group which has been quite vocal in their objections to the Maasvlakte II development and was responsible for the legal challenge which was upheld by the Council of State in 2005. Other objectors have entered the arena more recently such as Greenpeace²¹.

At a European level, informal meetings were organised between the key stakeholders involved in Maasvlakte II and the European Commission early in the proceedings to enable the authorities to understand better the requirements of the Birds and Habitats Directives (Paralia Nature, 2005). This engagement may have helped them garner the favourable response from the European Commission to the proposed development in 2003. The Port of Rotterdam, like Antwerp Port Authority and ABP in the Humber, has also engaged in a number of European-level projects and networks specifically focused on sharing best practice on reconciling tensions between nature and economy in port areas. This includes New!Delta, Paralia Nature and the Ecoports Foundation. These are viewed as one way of maintaining and strengthening links with the European Commission²².

Approaches to nature and compensation

“One port, two objectives. Creating space in both the port and the region, for both business and nature so that the quality of life in the whole region improves in net terms. The objectives are therefore linked. The expansion of the port, in the shape of Maasvlakte 2, can only be achieved if the nature and compensatory projects are also launched. In short, port expansion and enhancing the quality of life go hand in hand.”²³

The proposed Maasvlakte II port-industrial zone will extend out into the Voordelta, a Natura 2000 protected nature reserve (SAC and SPA). The land reclamation required to create this new industrial area will severely affect approximately 3125 hectares of seabed²⁴. This will result in the loss of habitat for various birds, marine wildlife and animals living on the sea floor as well as a reduction in available feeding grounds. A series of Environmental Impact Assessments (EIAs) have been carried out to assess the impact of the development on flora and fauna²⁵. The compensation measures proposed for limiting the impacts to nature from the construction of Maasvlakte II include the following (Port of Rotterdam and Maasvlakte 2 Project Organization, 2007):

- The creation of a 25,000 hectare **sea bed protection area** in the Voordelta. This coastal ecosystem located to the southwest of the Maasvlakte II site, will compensate for losses to the North Sea seabed caused by the development.

²¹ Interview source

²² Interview source

²³ <http://www.maasvlakte2.com/en/home>

²⁴ This includes direct losses of approx 2500 hectares, coupled with an area of 625 hectares which will be severely disturbed due to the changes in aeolian processes on the sand

(http://www.newdelta.org/navigatie/frameset.asp?knop_id=20000601&mnu=1)

²⁵ <http://www.maasvlakte2.com/en/home>

The surface area of the planned sea bed protection area is ten times larger than that of the projected land recovery (Port of Rotterdam and Maasvlakte 2 Project Organization, 2007)

- The **extension of dunes** to the north of Maasvlakte II, near Delfland (35 hectares). The new port/industrial area is expected to impact upon air streaming across the sand dunes of Voorne, a designated nature reserve. The new dune landscape will be situated on the coast between the towns of Hoek van Holland and Ter Heijde.
- The **creation of a foredune** (acting as a sea defence, 23 hectares). The dunes at Delfland will be located adjacent to an extra row of dunes which are being created (foredune) to reinforce the coastline (known as the ‘Weak Links’ project).

The sea bed protection area acts principally as restoration and improvement of an existing Natura 2000 area whereas the dune extension and creation are more direct compensation areas. All of the compensation measures proposed above act as compensation for the land reclamation of Maasvlakte II and for the wider effects of the development on the surrounding area (including nearby SAC/SPAs at Voorne’s Duin and Duinen Goeree)²⁶. The compensation measures have been calculated using a multiplier of 10 because new nature values are said to achieve only 10% of existing quality²⁷. Recreational visitors will be able to use the new conservation areas but activities including speedboats, jet skis, hang gliders or military exercises will be subject to regulation in certain areas.

Looking ahead...

If the construction permits and zoning plans are approved without further delays, then construction is expected to start in 2008²⁸. If construction begins as scheduled, Maasvlakte II is expected to be operational by 2013²⁹. Given the likelihood of some groups submitting an appeal against the final plans, the extent to which this could further delay the planning process remains uncertain.

The Port of Rotterdam is also leading work on ports and climate change. It recently launched the Rotterdam Climate Initiative, a programme designed to reduce the 1990 level of CO2 emissions in the Rotterdam area by 50% by 2025³⁰. This is in conjunction with local and regional partners including the municipality of Rotterdam, DCMR Environmental Protection Agency Rijnmond and Deltalinqs. Furthermore, the City of Rotterdam is hosting the 2008 C40 World Ports Climate Conference in July 2008. This is an attempt to collaborate in developing responses to climate change. In preparation for this, the Port of Rotterdam Authority held a conference ‘World Ports for a better Climate’ in November 2007 where 14 of the world’s largest ports (including Antwerp) gathered to discuss their responsibilities in helping to reduce greenhouse gas emissions³¹.

²⁶ http://www.newdelta.org/navigatie/frameset.asp?knop_id=20000601&mnu=1

²⁷ http://www.newdelta.org/navigatie/frameset.asp?knop_id=20000601&mnu=1

²⁸ <http://www.maasvlakte2.com/en/home>

²⁹ http://www.maasvlakte2.com/en/news/news_items/news_2008/Contract_construction_signed.jsp

³⁰ <http://www.wpcrotterdam.com/news/3>

³¹ <http://wpcrotterdam.com>

Note

We would welcome any feedback or comments on this working paper. Please direct these to either Professor David Gibbs (d.c.gibbs@hull.ac.uk, 01482 465330) or Professor Graham Haughton (g.f.haughton@hull.ac.uk, 01482 465006).

References

DCMR (Rijnmond Environmental Protection Agency) and Port of Rotterdam (2007) *Working together towards a sustainable port*, The Hague: Smidswater Breda.

Paralia Nature (2005) *Paralia Nature Report, Report Phase II*, available at www.imiparalianature.org

Port of Rotterdam (2007a) *Port Statistics 2006*, Rotterdam: Havenbedrijf Rotterdam NV.

Port of Rotterdam (2007b) *Rotterdam World Port*, Rotterdam: Havenbedrijf Rotterdam NV.

Port of Rotterdam and Maasvlakte 2 Project Organization (2007) *Maasvlakte 2, Space for the future*, Leiden: Drukkerij Groen.

ROM-Rijnmond (2005) *ROM-Rijnmond, platform, mediator and facilitator*, Rotterdam: ROM-Rijnmond.

Appendix 1: Comparator Table- Antwerp, Rotterdam and the Humber

	Antwerp	Rotterdam	Humber
Size of port development (hectares)	581ha	1000ha	20ha
Cost of port development	€600m	€3bn	£35m (approx €44m)
Size of mitigation/compensation (hectares)	11 areas created (ha not available)	25,000ha sea bed protection area, 58ha of land-based compensation	57ha of mudflat and 6ha of grassland
Cost of mitigation/compensation	€25m	€45m	£3.5m (approx €4.45m)
Designated site status	SPA SAC RAMSAR	SPA SAC	SPA SAC RAMSAR
Tiers of governance	EU National Flemish Municipal/Local	EU National Regional Municipal/Provincial	EU National Regional Local
Legal body	National Council of State	National Council of State	Secretary of State for Transport
Key Stakeholders involved	Antwerp Port Authority, Flemish Government, Local Authorities, Natuurpunt	Port of Rotterdam, Dutch Government, Rotterdam Metropolitan Region, Municipality of Rotterdam and Province of South Holland	Associated British Ports, Environment Agency, English Nature (now Natural England), RSPB and Wildlife Trust

